Amendments to the Claims

1.   (currently amended)   In a wireless communication system adapted to provide communication services to multiple mobile stations operating within a given coverage area, wherein the system dynamically allocates radio frequency bandwidth among the mobile stations according to a bandwidth allocation algorithm, and wherein the radio frequency bandwidth is used to send voice or data traffic to the mobile stations as part of providing the communication services to the mobile stations, a method comprising:

determining a number of active mobile stations that are concurrently operating in the given coverage area; and

determining that the number of active mobile stations exceeds a threshold and responsively changing the bandwidth allocation algorithm, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations.

2. (original) A computer readable medium having stored therein instructions for causing a processor to execute the method of claim 1.

3. (original) The method of claim 1, wherein responsively changing the bandwidth allocation algorithm comprises switching the bandwidth allocation algorithm to a maximum-aggregate-traffic algorithm.

4. (original) The method of claim 1, wherein responsively changing the bandwidth allocation algorithm comprises switching the bandwidth allocation algorithm to a common-data-throughput algorithm.

5. (original) The method of claim 1, wherein responsively changing the bandwidth allocation algorithm comprises switching the bandwidth allocation algorithm to a common-power algorithm.

6. (original) The method of claim 1, wherein responsively changing the bandwidth allocation algorithm comprises:

switching the bandwidth allocation algorithm to use a first bandwidth allocation algorithm to allocate the radio frequency bandwidth among mobile stations within a first group of mobile stations; and

switching the bandwidth allocation algorithm to use a second bandwidth allocation algorithm to allocate the radio frequency bandwidth among mobile stations within a second group of mobile stations.

7. (previously presented) The method of claim 1, wherein determining a number of active mobile stations that are concurrently operating in the given coverage area comprises:

determining a current time of day; and

using a predictive model to predict the number of active mobile stations that are concurrently operating in the given coverage area at the current time of day.

8. (original) The method of claim 1, wherein the wireless network is a CDMA network, and wherein the mobile station is a mobile phone.

9. (currently amended) In a CDMA network adapted to provide communication services concurrently to multiple mobile stations operating with a given coverage area, a method comprising:

determining that a threshold number of mobile stations being provided communication services are concurrently operating in the given coverage area; and

responsively changing a bandwidth allocation algorithm <u>for the mobile stations being provided communication services in the given coverage area</u>, wherein the bandwidth allocation algorithm is used to allocate a forward supplemental channel among the mobile stations, and wherein the forward supplemental channel is used to send voice or data traffic from a base station to the mobile stations as part of providing the communication services.

10. (original) A computer readable medium having stored therein instructions for causing a processor to execute the method of claim 9.

11. (original) The method of claim 9, wherein responsively changing the bandwidth allocation algorithm comprises switching the bandwidth allocation algorithm to a maximum-aggregate-traffic algorithm.

12. (original) The method of claim 9, wherein responsively changing the bandwidth allocation algorithm comprises switching the bandwidth allocation algorithm to a common-data-throughput algorithm.

13. (original) The method of claim 9, wherein responsively changing the bandwidth allocation algorithm comprises switching the bandwidth allocation algorithm to a common-power algorithm.

14. (original) The method of claim 9, wherein responsively changing the bandwidth allocation algorithm comprises:

switching the bandwidth allocation algorithm to use a first bandwidth allocation algorithm to allocate the forward supplemental channel among mobile stations within a first group of mobile stations; and

switching the bandwidth allocation algorithm to use a second bandwidth allocation algorithm to allocate the forward supplemental channel among mobile stations within a second group of mobile stations.

15. (original) The method of claim 9, wherein determining that a threshold number of mobile stations being provided communication services are concurrently operating in the given coverage area comprises:

determining a current time of day; and

using a predictive model to determine that the threshold number of mobile stations are concurrently operating in the given coverage area at the current time of day.

16. (previously presented) A method for allocating bandwidth among mobile stations in a wireless network, the method comprising:

determining a number of mobile stations that are concurrently being provided communication services by the wireless network;

determining that the number of mobile stations concurrently being provided communication services by the wireless network is below a predetermined threshold number;

determining that an amount of voice or data traffic buffered at a base station for transmission to a mobile station as part of providing the communication services is above a predetermined threshold amount; and

responsively increasing an amount of bandwidth allocated to the mobile station for transmitting the voice or data traffic from the base station to the mobile station.

17. (original)   A computer readable medium having stored therein instructions for causing a processor to execute the method of claim 16.

18. (previously presented) The method of claim 16, further comprising:

determining that the amount of voice or data traffic buffered at the base station for transmission to the mobile station as part of providing the communication services is below the predetermined threshold amount; and

responsively decreasing the amount of bandwidth allocated to the mobile station for transmitting the communication traffic from the base station to the mobile station.

19.   (original)   The method of claim 16, wherein the wireless network is a CDMA network, and wherein responsively increasing the amount of bandwidth allocated to the mobile

station comprises increasing an amount of a forward supplemental channel allocated to the mobile station.

20. (currently amended) A wireless communication system comprising:

a base station, having an antenna arrangement for communicating over an air interface with a plurality of mobile stations in a given coverage area, wherein the base station dynamically allocates bandwidth to the mobile stations according to a bandwidth allocation algorithm; and

program logic, stored in data storage and executable on a processor, to determine that a number of active mobile stations are operating concurrently in the given coverage area and to change the bandwidth allocation algorithm based on the number, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations.

21. (previously presented) The system of claim 20, wherein the program logic further includes logic to change the bandwidth allocation algorithm to a bandwidth allocation algorithm that substantially maximizes an aggregate data traffic throughput between the base station and the mobile stations.

22. (previously presented) The system of claim 20, wherein the program logic further includes logic to change the bandwidth allocation algorithm to a bandwidth allocation algorithm that provides approximately equal data traffic throughput rates between the base station and the respective mobile stations.

23. (previously presented) The system of claim 20, wherein the program logic further includes logic to change the bandwidth allocation algorithm to a bandwidth allocation algorithm in which the base station uses approximately equal power levels for transmitting data traffic to the respective mobile stations.

24. (original) The system of claim 20, wherein the base station uses CDMA to communicate over with air interface with the mobile stations, and wherein the mobile stations are mobile phones.